UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/545,455	04/07/2000	Gathen Garcia	7910-0049-13	2353

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EXAMINER
GARCIA OTERO, EDUARDO

ART UNIT	PAPER NUMBER
2123	3

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Applicati n N .	Applicant(s)
Offic Action Summary	09/545,455	GARCIA ET AL.
	Examin r	Art Unit
	Eduardo Garcia-Otero	2123

-- The MAILING DATE of this c mmunication appears on the c ver sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>07 April 2003</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☐ All b)☐ Some * c)☐ None of:
1.☐ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION: Non-Final (first action on the merits)

Introduction

1. Title is: UTILITY STATION AUTOMATED DESIGN SYSTEM AND METHOD

2. First named inventor is: GARCIA

3. Claims 1-21 have been submitted, examined, and rejected.

4. Priority is claimed to provisional application filed 4/9/99.

Index of Prior Art

5. **Shumaker** refers to AutoCAD and its applications Advanced Release 14", by Terence M. Shumaker et. al., The Goodheart-Willcox Company, Inc., May 1998.

6. **Young** refers to US Patent 6,038,567.

35 USC § 112-Second Paragraph-indefinite claims

7. The following is a quotation of the second paragraph of 35 U.S.C. 112: The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. **Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite** for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. In claim 1, the term "**an association mechanism** that applies the symbols to the predefined layouts to generate a facility drawing set" is not clearly defined. There is some discussion of "associated with" at page 4 line 20, and again at at page 11 line 24, but these discussions do not appear related to said term in claim 1.

10. Also in claim 1, the term "**configured to store** a plurality of symbols" is not clearly defined. It is not clear if said term means that the symbols are actually stored, or if the memory is organized/configured in some way as to facilitate future storing. Possibly an empty file is created to store symbols at a later time.

11. Again in claim 1, "**configured to display a plurality of predefined layouts of the facility**" is not clearly defined. Similar to the above discussion regarding storage, it is not clear whether some display is presently required, or whether some arrangement is made to facilitate future displaying.

12. In claim 4, **"configured to run"** is not clearly defined. See above discussions regarding storage and display.

13. In claim 7, the term **"hierarchically arranged** with respect to the layers" is not adequately defined. No hierarchy has been defined with respect to layers. See "overlaid in layers" at page 4 line 21.

14. In claims 10 and 16, the term **"associating the symbols** with the selected facility layout" is not clear. Note that claims 10 and 16 additionally have the term **"overlaying the symbols** onto the selected facility layout", and it is not clear how these terms are distinct. In view of the specification, both of these terms appear to mean merely "inserting" or "placing" or "adding" the symbol into the layout. The terms "associating" and "overlaying" generally have different (and more complex) meanings than merely inserting. Note claim 1 uses the term "applies the symbols". The terminology in the claims should be consistent, with the same words having the same meaning, and with different words having different meanings. Also see specification page 8 for discussion of layers.

15. In claim 13, **"processing** the plurality of attributes using at least one of a database application and a spreadsheet application" is not clear. The term "processing" is not clear in the context of "attributes". It is not clear what types of processes may be performed upon said attributes.

16. All dependent claims are rejected for the same reasons as their respective independent claims 1, 10, and 16. Thus all claims (1-21) are rejected as indefinite.

Claim Interpretation

17. **The claim language is interpreted in light of the specification.** Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns,* 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

18. The Examiner hereby interprets the terms "predefined layout" (claim 1) as equivalent to "standard facility layout" (claim 10) throughout the claims.

35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action: (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject

matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

20. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: Determining the scope and contents of the prior art. Ascertaining the differences between the prior art and the claims at issue. Resolving the level of ordinary skill in the pertinent art. Considering objective evidence present in the application indicating obviousness or nonobviousness.

21. **Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable.**

22. <u>Claim 1 is rejected</u> under 35 U.S.C. 103(a) as being unpatentable over Shumaker in view of Young.

23. Claim 1 is an independent "method" claim with 4 limitations, labeled by the Examiner for clarity.

24. [1]-**"a storage mechanism configured to store plurality of symbols, the symbols representing components of the facility"** is disclosed by Shumaker page 487 "save the menu file" and page 481 Figure 12-2 "ANSI Mechanical™", and page 486 Figure 21.7 "Symbols", and page 486 Figure 21.8 "isometric process piping drawings", and page 478 "image tile menu of a symbol library that you use in a specific discipline of drafting or design... Structural... Piping... Electrical..." Note that these files and symbols and drawings and menus are inherently saved by AutoCAD in a storage mechanism.

25. [2]-**"a server coupled to the storage mechanism and configured to display"** is disclosed by Shumaker page 348 "Internet" and "network" and "Internet Service Provider".

26. [4]-**"the server being loaded with an association mechanism that applies the symbols to the predefined layouts to generate a facility drawing set"** is disclosed by Shumaker page 3 "AutoCAD... Release 14". Note that AutoCAD commercial software may be loaded into a stand-alone computer, or into a server of a network.

27. Shumaker does not expressly disclose the remaining limitation.

28. [3]-**"a plurality of predefined layouts"** is disclosed by Young "each predefined layout" at Abstract, and "wizard" and "predefined layout" at column 1 line 18.

29. **At the time** the invention was made, it would have been obvious to a person of ordinary skill in the art to use Young to modify Shumaker. One of ordinary skill in the art would have been motivated reduce AutoCAD design time by beginning with a predefined layout or template, thus eliminating "repetitious editorial changes" per Young column 2 line 10. Additionally, the use of templates tends to standardize the designs, and thus increase productivity and reduce errors.

30. Claims 2-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shumaker in view of Young.

31. In claim 2, **"stores a plurality of attributes corresponding to the symbols"** is disclosed by Shumaker page 386, "In ASE, a link is a connection between a graphic object in the AutoCAD drawing and a row from a table within a database. You can select an object in the drawing, such as a computer, and have immediate access to all of the information stored in the database about that computer. Using ASE and the ASE LINKS command, you can create, delete, view and edit links" and page 389 "displayable attributes".

32. In claim 3, **"at least one of cost estimate and a materials list"** is disclosed by Shumaker page 323 "materials list" and page 386 "database". Note that in the context of AutoCAD, the term "materials list" at page 323 has a very specific meaning (the types of materials used). Alternately, in the construction industry, the term "materials list" indicates a list of parts and quantities that will be needed for a construction, and would be contained in the "database" referenced at page 386. It is not clear which type of "materials list" is intended by the Applicant, but both types are disclosed by Schumaker.

33. In claim 4, **"at least one of a database application and a spreadsheet application to process the plurality of attributes"** is disclosed by Shumaker page 386 "database".

34. In claim 5, **"the storage mechanism is accessible by a plurality of user stations"** is disclosed by Shumaker page 348 "Internet" and "network".

35. In claim 6, **"a plurality of dialog boxes to guide selection of the symbols"** is disclosed by Shumaker page 535 "Programmable dialog boxes can be used to completely customize the interface of your AutoLISP programs... Using dialog boxes improves efficiency and reduces data entry errors".

36. In claim 7, **"the plurality of dialog boxes are hierarchically arranged with respect to layers of the facility drawing set"** is disclosed by Shumaker page 535 "Programmable dialog boxes can be used to completely customize the interface of your AutoLISP programs... Using dialog boxes improves efficiency and reduces data entry errors" and page 255 "layer", and page 477 "cascading submenus" and page 478 "You can call additional image tile menus from the initial one", and page 473 "branching".

37. In claim 8, **"at least one of a utility facility, a water facility, and a gas facility"** is disclosed by Shumaker page 486 Figure 21.8 "isometric process piping drawings".

38. In claim 9, **"the facility drawing set comprises construction drawings"** is disclosed by Shumaker page 486 Figure 21.8 "isometric process piping drawings".

39. MOTIVATION FOR CLAIMS 2-9. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Young to modify Shumaker. One of ordinary skill in the art would have been motivated reduce AutoCAD design time by beginning with a predefined layout or template, thus eliminating "repetitious editorial changes" per Young column 2 line 10. Additionally, the use of templates tends to standardize the designs, and thus increase productivity and reduce errors.

40. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shumaker in view of Young.

41. Claim 10 is an independent "method" claim with 5 limitations, labeled by the Examiner for clarity.

42. [2]-**"retrieving a plurality of symbols from a symbol database based upon the selecting step, the symbols representing components of the facility"** is disclosed by Shumaker page 481 Figure 12-2 "ANSI Mechanical™", and page 486 Figure 21.7 "Symbols", and page 486 Figure 21.8 "isometric process piping drawings", and page 478 "image tile menu of a symbol library that you use in a specific discipline of drafting or design... Structural... Piping... Electrical..."

43. [3]-**"associating the symbols with the selected facility layout"** is disclosed by Shumaker page 477 "insert a variety of blocks, or drawing files of symbols. These symbols can be used for any drawing discipline that you use."

44. [4]-"**overlaying the symbols onto the selected facility layout**" is disclosed by Shumaker page 477 "insert a variety of blocks, or drawing files of symbols. These symbols can be used for any drawing discipline that you use."

45. [5]-"**generating a facility drawing set based upon the overlaying step**" is disclosed by Shumaker page 477 "insert a variety of blocks, or drawing files of symbols. These symbols can be used for any drawing discipline that you use."

46. Shumaker does not expressly disclose the remaining limitation.

47. [1]-"**selecting a facility layout from a plurality of standard facility layouts**" is disclosed by Young "each predefined layout" at Abstract, and "wizard" and "predefined layout" at column 1 line 18.

48. **At the time** the invention was made, it would have been obvious to a person of ordinary skill in the art to use Young to modify Shumaker. One of ordinary skill in the art would have been motivated reduce AutoCAD design time by beginning with a predefined layout or template, thus eliminating "repetitious editorial changes" per Young column 2 line 10. Additionally, the use of templates tends to standardize the designs, and thus increase productivity and reduce errors.

49. Claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shumaker in view of Young.

50. In claim 11, "**displaying a plurality of design dialog boxes based upon the selecting step, the design dialog boxes providing prompts to guide selection of the components of the facility and receiving input design information in accordance with the dialog boxes**" is disclosed by Shumaker page 535 "Programmable dialog boxes can be used to completely customize the interface of your AutoLISP programs... Using dialog boxes improves efficiency and reduces data entry errors".

51. In claim 12, "**retrieving a plurality of attributes corresponding to the symbols**" is disclosed by Shumaker page 386, "In ASE, a link is a connection between a graphic object in the AutoCAD drawing and a row from a table within a database. You can select an object in the drawing, such as a computer, and have immediate access to all of the information stored in the database about that computer. Using ASE and the ASE LINKS command, you can create, delete, view and edit links" and page 389 "displayable attributes".

52. In claim 13, **"processing the plurality of attributes using at least one of a database application and a spreadsheet application"** is disclosed by Shumaker page 386 "database".

53. In claim 14, **"generating at least one of a cost estimate and a materials list based upon the overlaid symbols and the corresponding attributes"** is disclosed by Shumaker page 323 "materials list" and page 386 "database". Note that in the context of AutoCAD, the term "materials list" at page 323 has a very specific meaning (the types of materials used). Alternately, in the construction industry, the term "materials list" indicates a list of parts and quantities that will be needed for a construction, and would be contained in the "database" referenced at page 386. It is not clear which type of "materials list" is intended by the Applicant, but both types are disclosed by Shumaker.

54. In claim 15, **"at least one of a utility facility, a water facility, and a gas facility"** is disclosed by Shumaker page 486 Figure 21.8 "isometric process piping drawings".

55. MOTIVATION FOR CLAIMS 11-15. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Young to modify Shumaker. One of ordinary skill in the art would have been motivated reduce AutoCAD design time by beginning with a predefined layout or template, thus eliminating "repetitious editorial changes" per Young column 2 line 10. Additionally, the use of templates tends to standardize the designs, and thus increase productivity and reduce errors.

56. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shumaker in view of Young.

57. Claim 16 is an independent "computer readable medium" claim with 5 limitations, labeled by the Examiner for clarity.

58. [1]-**"retrieving a plurality of symbols from a symbol database** is disclosed by Shumaker page 481 Figure 12-2 "ANSI Mechanical™", and page 486 Figure 21.7 "Symbols", and page 486 Figure 21.8 "isometric process piping drawings", and page 478 "image tile menu of a symbol library that you use in a specific discipline of drafting or design... Structural... Piping... Electrical..."

59. [3]-**"associating the symbols with the selected facility layout"** is disclosed by Shumaker page 477 "insert a variety of blocks, or drawing files of symbols. These symbols can be used for any drawing discipline that you use."

60. [4]-**"overlaying the symbols onto the selected facility layout"** is disclosed by Shumaker page 477 "insert a variety of blocks, or drawing files of symbols. These symbols can be used for any drawing discipline that you use."

61. [5]-**"generating a facility drawing set based upon the overlaying step"** is disclosed by Shumaker page 477 "insert a variety of blocks, or drawing files of symbols. These symbols can be used for any drawing discipline that you use."

62. Shumaker does not expressly disclose the remaining limitation.

63. [2]-**"based upon a selected facility layout among a plurality of standard facility layouts, each of the standard facility layouts corresponding to a plurality of symbols, the symbols representing components of the facility"** is disclosed by Young "each predefined layout" at Abstract, and "wizard" and "predefined layout" at column 1 line 18.

64. **At the time** the invention was made, it would have been obvious to a person of ordinary skill in the art to use Young to modify Shumaker. One of ordinary skill in the art would have been motivated reduce AutoCAD design time by beginning with a predefined layout or template, thus eliminating "repetitious editorial changes" per Young column 2 line 10. Additionally, the use of templates tends to standardize the designs, and thus increase productivity and reduce errors.

65. <u>Claims 17-21 are rejected</u> under 35 U.S.C. 103(a) as being unpatentable over Shumaker in view of Young.

66. In claim 17, **"displaying a plurality of design dialog boxes, the design dialog boxes providing prompts to guide selection of the components of the facility; and receiving input design information in accordance with the dialog boxes"** is disclosed by Shumaker page 535 "Programmable dialog boxes can be used to completely customize the interface of your AutoLISP programs... Using dialog boxes improves efficiency and reduces data entry errors".

67. In claim 18, **"retrieving a plurality of attributes corresponding to the symbols"** is disclosed by Shumaker page 386, "In ASE, a link is a connection between a graphic object in the AutoCAD drawing and a row from a table within a database. You can select an object in the drawing, such as a computer, and have immediate access to all of the information stored

in the database about that computer. Using ASE and the ASE LINKS command, you can create, delete, view and edit links" and page 389 "displayable attributes".

68. In claim 19, **"processing the plurality of attributes using at least one of a database application and a spreadsheet application"** is disclosed by Shumaker page 386 "database".

69. In claim 20, **"generating at least one of a cost estimate and a materials list based upon the overlaid symbols and the corresponding attributes"** is disclosed by Shumaker page 323 "materials list" and page 386 "database". Note that in the context of AutoCAD, the term "materials list" at page 323 has a very specific meaning (the types of materials used). Alternately, in the construction industry, the term "materials list" indicates a list of parts and quantities that will be needed for a construction, and would be contained in the "database" referenced at page 386. It is not clear which type of "materials list" is intended by the Applicant, but both types are disclosed by Shumaker.

70. In claim 21, **"at least one of a utility facility, a water facility, and a gas facility"** is disclosed by Shumaker page 486 Figure 21.8 "isometric process piping drawings".

71. MOTIVATION FOR CLAIMS 17-21. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Young to modify Shumaker. One of ordinary skill in the art would have been motivated reduce AutoCAD design time by beginning with a predefined layout or template, thus eliminating "repetitious editorial changes" per Young column 2 line 10. Additionally, the use of templates tends to standardize the designs, and thus increase productivity and reduce errors.

Additional Cited Prior Art

72. The following US patents or publications are hereby cited as prior art, but have not been used for rejection. Applicant should review these carefully before responding to this office action.

73. US Patent 5,764,533 disclosed "predefined layout" at column 1 line 40.

Conclusion

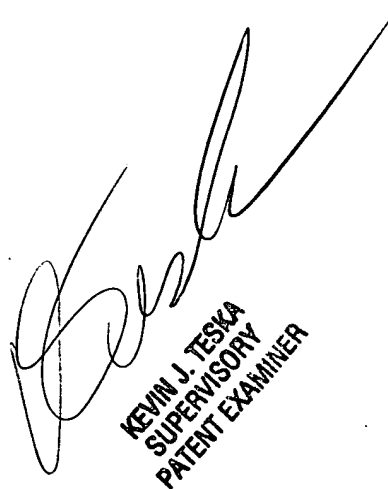74. All claims stand rejected under 35 USC 103, and under 35 USC 112 first paragraph.

Communication

75. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eduardo Garcia-Otero whose telephone number is 703-305-0857. The examiner can normally be reached on Tuesday through Friday from 9:00 AM to 8:00 PM. If

attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor,

Kevin Teska, can be reached at (703) 305-9704. The fax phone number for this group is

703-872-9306. Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the group receptionist, whose telephone number is (703)

305-3900.

<div align="center">* * * *</div>

KEVIN J. TESKA
SUPERVISORY
PATENT EXAMINER